

DOCUMENT RESUME

ED 330 341

IR 053 503

AUTHOR Selbert, Daphne
TITLE The Small Academic Library and Its Encounter with Technology: A Study of the Use of Online Searching and CD-ROM Technology in Small Private Colleges in Illinois.
PUB DATE Nov 90
NOTE 17p.; Paper presented at the Illinois Library Association Conference (Urbana, IL, November 8-9, 1990).
PUB TYPE Information Analyses (070) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Libraries; Budgeting; Databases; Higher Education; *Information Technology; Integrated Library Systems; *Library Role; Library Surveys; *Online Searching; *Optical Data Disks; *Small Colleges
IDENTIFIERS Illinois

ABSTRACT

This examination of the impact of technology on the educational role of small academic libraries focuses on the information access aspect of technology. Librarians at 26 colleges in Illinois with enrollments of under 3,000 students responded to a survey which measured the libraries' access to databases through online searching and the use of CD-ROM databases. The survey investigated the types of databases used, fee charges for online database searching, amount budgeted for online searching, average number of online searches per week, CD-ROM databases currently used and those under consideration, the arrangement of CD-ROM stations, budget allocations for CD-ROM, and hardware allocations. Responses are tabulated for the survey group as a whole and separately for schools with student enrollments of less than 1,000. The findings of the survey indicate that information access is something which institutions have seriously considered and tailored to their particular needs. While cost is a major consideration for these technological acquisitions, small institutions recognize that access to information is an important function of library services. (13 references) (MAB)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

The Small Academic Library and Its Encounter with Technology: a study of the use of online searching and CDROM technology in small private colleges in Illinois

by Daphne Selbert, Principia College

Alvin Toffler is well known through his books Future Shock and The Third Wave as an analyst and prognosticator of trends. Alvin and Heidi Toffler will soon release a new book called Powershift: Knowledge, Wealth and Violence at the Edge of the 21st Century. (Bantam, 1990) He talks about this "powershift" in an article found in the November 1990 World Monitor Magazine:

"One of the greatest power imbalances on the earth today divides the rich countries from the poor. The unequal distribution of power, which affects the lives of billions of us, will soon be transformed as a new system of wealth creation spreads. (. . .)

From now on the world will be split between the fast and the slow." ¹

The driver of this powershift will not surprise us -- it is technology. Technology has become vital and symbolic in every aspect of our lives -- in banking, the super market check-out counter, in the stock market, and in our libraries. Toffler talks about the chasm which will develop between (technologically) fast countries and slow countries. Fast and slow has become a visible factor in our libraries.

One wonders if the "fast/slow" world image presents a macrocosm for information challenges found in academia. The larger, and therefore better funded research libraries

¹ Alvin Toffler, "Toffler's Next Shock," World Monitor, November 1990, p. 34.

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Daphne Selbert

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

can be seen as "fast." Do we see the smaller academic institution as, by mere economics, relegated to the "slow" lane? Has technology created a world of informational (or access) "haves" and "have-nots?"

As a librarian in a small, private liberal arts college, I have a special stake in this question.

No one will argue that the small academic institution does not have a lot to offer students. The small institution scores high in the area of faculty/student contact, usually high in the area of a pleasant atmosphere (or student life), and high on support for the student learning experience. Toffler's thesis asks one, however, if our students will not be caught in the "slow" lane, technologically speaking--and be left out of the "first world of information and access."

Because I am a librarian, my concerns focus quite naturally on the library's role in the educational process and how this role is affected by technology. The theme of this conference "Libraries in a Changing Environment: People/Technology" speaks directly to the "fast/slow" Technology trends.

This paper will focus on one aspect of technology--information access. I will look at access to databases through online searching and the use of CDROM databases. I will be looking at information access in these areas as found in small private colleges in the state of Illinois. I will be sharing the findings from a survey sent to 31 colleges in Illinois who have student enrollments of less than 3000 students. A survey was sent out to 31 colleges on October 1st. I have received 26 responses -- or a return rate of almost 84%. The response was either a measure of interest in the topic--or of the power of the stamped self-addressed return envelope. Judging from the number of people who

wanted to have reports of the results, I think it was the former. The survey sought to measure the use and funding of on-line searching and of CDROM databases in small academic institutions. I also queried some cost and budget factors to measure the ongoing commitment to these areas.

Selection of Institutions to be Surveyed:

In preparing this survey, I was interested in finding out how institutions with challenges, fiscal and academic, similar to my own were handling the finances and selection of information access. I selected those four year institutions in Illinois listed in the current American Library Directory² and the HEP Higher Education Directory³ as having student populations of less than 3000. I actually tabulated responses using the group as a whole and then did a separate tabulation using those schools who had student enrollments of less than 1000. I wanted to see if there was any difference between "small" and "really small" institutions.

Online Searching:

The first questions in the survey dealt with online searching and its funding in small academic institutions. Computer access to databases has been part of library practice (and library literature) for some time. Funding of databases has been heavily discussed in the literature, in articles such as the Beltran article in The Journal of

²American Library Directory. New York: R. R. Bowker, 1990.

³ The HEP Higher Education Directory, Ed. by Constance Healey Torregrosa. (Falls Church: Higher Education Publications, 1989)

Academic Librarianship.⁴ The question of who pays for the quest has had a number of different answers even at the Research Library level.

Libraries were asked which database services are presently used by their institutions.

Databases Used by All Respondents (26)

```
NONE      //  [anticipate Dialog this year /]
Dialog    ////////////////
BRS        ////
Knowledge Index ////
BRS After Dark /
Chem Abstracts
Wilsonline /////
Compuserve /
EPIC      ///
ILLINET ONLINE/LCS //
CCH (Accountant's Index) /
UTLAS     /
```

Use of online databases by college libraries is almost universal. Only two of the respondents do not use online database searching, and one of those indicated that they would be beginning to use Dialog within this academic year. Not surprisingly, the main online service used was the Lockheed megaservice, Dialog Information Services. Twenty two of the respondents said that they used Dialog. Other services were varied and much lower in their numbers. I was, quite frankly, surprised at how little Wilsonline was used. My assumption was that in a smaller liberal arts setting it would be a natural source of quick information.

In narrowing the survey pool to colleges with less than 1000 students (11 colleges) the response was as follows:

⁴ Ann Bristow Beltran, "Funding Computer-Assisted Reference in Academic Research Libraries," The Journal of Academic Librarianship, March, 1987, p. 4-7.

Databases Used by Smallest Institutions (11)

NONE	/
Dialog	////////
BRS	//
Knowledge Index	/
Wilsonline	/
Compuserve	/
EPIC	///
ILLINET ONLINE/LCS	/

Again, Dialog was the service most heavily used. Eight out of the eleven institutions subscribed to Dialog. Only one institution did not use online searching and had no plans, at this point, to begin doing so. Interestingly, of the people who reported using EPIC, all of them were smaller institutions with less than 1000 students. Lower cost alternatives such as Knowledge Index were reported to be more heavily used at the larger institutions. The one institution which reported the subsidizing of End-User searching in Knowledge Index had a student population of 1300.

The next question addressed some of the issues raised in Ann Beltran's article. While Beltran discusses funding of computer assisted reference in academic research institutions, the questions raised are the same at our smaller institutions. How much of computer-assisted research is appropriately funded by the institution? More practically, how much online searching can be financed by an institution? The next two charts demonstrate that we as librarians and institutions are thinking this question through creatively and within our own institutional abilities to pay.

Fee Charges for Online Database Searching

Reference Service funded by library ///////////////
Faculty Searches funded by library ///////////////
Student Searches funded by library ///////////////
Faculty Searches to \$10 by library ///////////////
Faculty Searches to \$75.00 funded by library /
Student Searches to \$5.00 by library //
Student Searches to \$10.00 by library /
Student Searches funded to \$75.00 by library /
Faculty Searches paid by Department ///////////////
Student Searches paid by department ///////////////
Student Searches paid by Student //
Special fee schedule / [\$5 charged for any search, library pays next \$5]
Library subsidizes end-user searches/Knowledge Index /
Specific \$5 charge to students or faculty for any search /
Student searches in specific courses ///
Staff/Administration up to \$25 by library /
Graduate students 1 free search /
Library pays online costs; user pays item print costs /
Public pays \$5.00 fee plus costs /

The next chart shows that response for the smaller institutions was similarly distributed and just as varied in its response.

Fee Charges for Online Database Searching in Institutions with less than 1000 students

Reference Service funded by library ///////////////
Faculty Searches funded by library ///////////////
Student Searches funded by library ///////////////
Faculty Searches to \$10 by library /
Faculty Searches paid by Department //
Student Searches paid by Student ///////////////
Student searches in specific courses /
Staff/Administration up to \$25 by library /
Library pays online costs; user pays item print costs /

Our institutions are still working through the concept of funding. The greater proportion of libraries provide reference searching funded by the library. Some of that searching is used with reference tools which are less expensive to access online than to maintain as a standing order on the shelves. Some of that service accesses specific

data such as census data available from Donnelly Demographics. Faculty searches are funded by 12 of the 26 libraries, with varying degrees of generosity. In 6 libraries faculty searches were funded by the department. There were a variety of fee structures for student, staff, faculty and public searching.

While we were prepared with a variety of policies for online searching, library budgets did not provide a lot of money for this searching. For those libraries who do fund online searching, the budget allocations were reported as follows:

Amount Budgeted for Online Searching

Under \$2000 ///////////////
\$2000-\$3000 ///////////
\$3000-5000 /////
Over \$5000 ///
Funding in other line items /

Funding was identified by 9 of the 11 institutions with student enrollments under 1000, but the funding was very limited.

Amount Budgeted for Online Searching / Smaller Institutions

Under \$2000 /////
\$2000-\$3000 ////
\$3000-5000
Over \$5000
Funding in other line items /

If libraries are funding online searching at a low financial level, they are also not doing very many online searches. The survey asked libraries to indicate how many online searches were performed in an average week during the academic term. The overall response was as follows:

Average Number of Online Searches in a Week

Less than 5 ///////////////
5-10 /////
10-20
20-30 /

In the smaller institutions 8 out of the 11 institutions reported the average number of searches was less than 5. Two institutions reported doing between 5 and 10 searches on an average. One aspect of a decline in a request for on-line searches is increase in the use of CD-ROM technology. The use of CD-ROM technology was the focus of the rest of the survey.

CD-ROM Technology and its use in Small Colleges

A quick perusal of almost any journal related to libraries reveals the perceived blessings and challenges of the "CD-ROM explosion." Steven Zinc in the February issue of Library Journal, warns us of the necessity for "Planning for the Perils of CD-ROM." 5 Zinc warns of the cost of CD-ROM subscriptions and equipment, the impact on human resources and even the danger of viruses. Paul Nicholls and Ria Van Den Elshout looked at 496 CD-ROM databases available for library applications in the February 1990 edition of Database. They considered reference, source and index databases, according to their primary nature. Indexes included bibliographic databases such as Cat CD450, Bibliofile, ERIC, the Wilson databases, etc. Source databases were databases with full-text or numeric data, maps, charts, encyclopedias, etc. Reference databases were described as directories (such as telephone directories, Who's Who, etc.) and

⁵ Steven D. Zink, "Planning for the Perils of CD-ROM," Library Journal, February 1, 1990, p. 1-5.

catalogs of non-bibliographic items.⁶ Other articles discuss end-user response to various CD-ROM databases. We are reading about CD-ROM. We are thinking about CD-ROM. We gasp at the cost of CD-ROM. But we are bringing it into our libraries.

The survey asked libraries if they subscribed to CD-ROM databases, and if so, to which databases they subscribed. If a library didn't subscribe to CD-ROM databases, they were asked what CD-ROM databases were being considered for future use. Finally, of course, libraries were asked the money question--what budget was allotted to this technology, both for hardware and ongoing subscriptions.

In our institution the decision to install public access CD-ROM databases was a major point of discussion. Over a two year period the reference staff tested two major systems and solicited faculty and student input and did much financial juggling to select the system we felt best suited for present and future needs. It was agony. I was surprised, therefore, to see that CD-ROM was a presence in many similar colleges. Of the 26 colleges surveyed, 20 of them stated that they had CD-ROM databases for public use. (One institution has the GPO catalog on Silver Platter for use by librarians only.) The breakdown of databases, however, showed that institutions are very much directed to their individual needs.

Databases Selected for Present Use (26 respondents)

ERIC ////////// (SP//)(Dialog /) (OCLC ////)
GPO Monthly Catalog //// (SP ///)[*for librarian use only /] (OCLC /)
Wilsonline: Reader's Guide /
Business Periodicals Index ///
Humanities Index //
MLA ///
Social Sciences Index ///
Religion Index //

⁶ Paul Nicholls and Ria Van Den Elshout, "Survey of Databases Available on CDROM: Types, availability, and content," Database, February, 1990, p. 18-23.

Education Index /
 General Science /
 Applied Sci/Tch /
 EGLI /
 Infotrak: Academic Index ///////////////
 Business /
 National Newspaper /
 Disclosure //
 BIP /////
 CNAHL /
 Magazine Article Summaries /
 CDWORD /
 UMI Periodical Abstracts on Disk /
 Psychlit //
 Languages of the World /
 Newsbank //
 OED /
 REX /

It was not surprising that the well-reviewed, aggressively marketed, and broad-based database INFOTRAK (Academic Index) was most often selected. It was selected by 13 libraries. In five of these libraries INFOTRAK was the only CD-ROM Index provided. You will note that databases selected did run the gamut of those available. Reference and source databases such as OED were also represented. It did not surprise me that among the smaller institutions were four of the six institutions not yet providing CD-ROM for public use. With less students and, therefore less tuition, these colleges were more likely to be wary of the "perils" presented by Steven Zinc. A strong majority (7 out of 11) institutions did list some CD-ROM subscriptions.

CDROM Subscriptions by Smaller Institutions (11)

ERIC // (OCLC //)
 GPO Monthly Catalog (SP //)
 Wilsonline Reader's Guide /
 Business Periodicals Index /
 Humanities Index /
 Social Sciences Index /
 Infotrak
 Academic Index /////
 National Newspaper /
 BIP /
 BIP Plus Reviews /
 Magazine Article Summaries /
 CDWORD /

Newsbank /

Again, while the INFOTRAK Academic Index is strong, there is a good variety of databases represented.

Of the colleges which do not presently subscribe to CD-ROM databases, 5 out of 6 institutions did respond that they are considering their options in this area. The databases presently listed as under consideration are as follows:

Databases Under Consideration in Institutions Where CD-ROM is not used (6 institutions)

Under consideration:

ERIC Silver Platter version //
ERIC OCLC version /
Psych Abstracts (SP) /
PAIS /
INFOTRAK: Academic //
GPO Monthly Catalog /
Psychlit /
Meldine /
Disclosure /
Wilsonline /
Facts on File /

Libraries are thinking about their CD-ROM subscriptions. They are tailoring their choices to their individual needs.

CD-ROM, as Zinc points out, involves an investment not only in an ongoing subscription cost, it involves choices in hardware. Whether it is a matter of hardware cost, a matter of patron use demands, or the newness or our explorations, the smaller institution does not tend to be terribly creative in its choice of hardware options. While CD-ROM providers such as WILSONDISC have allowed for a network environment ⁷ the smaller institutions tend to confine their CD-ROM stations to single use stations.

Arrangement of CDROM Stations (20 Institutions)

⁷ "Wilson announces policy for network usage of WILSONDISC," Wilson Library Bulletin, April 1989, p. 9.

Single stations

with no public access /
with one station // // // // // // // //
with two stations // // //
with three stations /
with four stations //

Use of a file server

Network arrangement:

LANTASTIC /
LAN under consideration /

It did interest me that the only network arrangement listed, LANTASTIC, was being used at an institution with less than 1000 students.

Finances are a hard thing. CD-ROM is a new technology. In an age where budgets are often "flat" or increased only for inflation, it is difficult to insert a new line item or lobby for a new format of service. If this survey is an indication, most smaller institutions "hide" CD-ROM technology in present budgets. Subscriptions to CD-ROM often are part of a serials budget. CD-ROM stations may be part of a hardware allocation. Line item budgets were listed for 15 of the 26 institutions.

Budget Allocations for CDROM (26 respondents)

Under 2000 //
2000-4000 // // // // //
4000-6000 // // //
6000-8000
8000-10,000 /
Over 10,000 /

Not separate allocation, but provided for:

8000 //
3500 /
3000 /
As needed //

Budgeting for the hardware was even less overt. Only three institutions specifically budgeted for hardware in the next fiscal year.

Hardware Allocations

No specific allocation ///////////////
Under \$2000 //
2000-4000 /////
4000-6000 //
6000-8000 /

Conclusions:

Will the small college be left in the "slow" lane, left behind in the dust of computer chips and telecommunications bills? I don't think so. My study of the use of CD-ROM and online searching in the small college left me very optimistic. I am optimistic, first of all because of there was enough interest in this subject to facilitate a return of 84% of the surveys sent out. I am optimistic to find that technology -- information access is something which institutions are thinking through seriously and tailoring to their particular needs. I am encouraged by our creative approach to financing. Articles remind us that some grant funding is available ⁸, but that is a whole other paper. While the cost is a major factor, what I find most encouraging is that the small institution is recognizing that access to information is an important factor of library service. It may well be as important as the purchase of materials. The reality of including this as a line-item budget will come.

The concept of "fast/slow" is an important one to consider. It is a warning for us as world citizens in an information market. Toffler warns about the "maldistribution of

⁸ Deon Knickerbocker, "CD-ROM in a Small-to Medium-Sized Academic Library," in Operations Handbook for the Small Academic Library. Ed. by Gerald McCabe. New York: Greenwood Press, 1989, pp. 189-197.

communications" and the "lopsided distribution of computers, databases, technical publications, research expenditures."⁹

Toffler sees a world economic situation as one with very uneven distribution of technology, particularly in the areas of telecommunication. Academia -- even small-time academia -- is hooked in to the telecommunications link. We may utilize technology only as we can afford it, or in a manner tailored to specific insitutional needs, but we are hooked into the system. Where the business world may function on a level of cut-throat competition or a triage mentality, libraries do not. It is especially true in the state of Illinois that libraries work hard at sharing technology and resources. Technologically speaking, we may not all travel at the warp speed of an academic research library, but even the smaller library will not present a danger in the technological fast lane.

November, 1990

⁹ Toffler, p. 44.

Bibliography

The American Library Directory. New York: R. R. Bowker, 1990.

Allen, Gillian, "Database Selection by Patrons Using CD-ROM," College and Research Libraries, January, 1990, p. 69-75.

Bamford, Carol M., "Allocating Resources for CD-ROM: a Vendor Perspective," Library Journal, February 1, 1990, p. 58-59.

Beltran, Ann Bristow, "Funding Computer-Assisted Reference in Academic Research Libraries," The Journal of Academic Librarianship, \, March, 1987, pp. 4-7.

The HEP Higher Education Directory. Ed. by Constance Healey Torregrosa. Falls Church, VA: Higher Education Publications, 1989.

Knickerbocker, Deon, "CD-ROM in a Small- to Medium-Sized Academic Library," in Operations Handbook for the Small Academic Library. Ed. by Gerald McCabe. New York: Greenwood Press, 1989.

Nicholls, Paul and Ria Van Den Elshout, "Survey of Databases Available on CD-ROM: Types, Availability, and Content," Database, February, 1990, pp. 18-23.

Schultz, Kim and Kristine Salomon, "End Users Respond to CD-ROM," Library Journal, February 1, 1990, p. 56-57.

Strum, Rebecca, "Caught in the Squeeze: Limited Reference Budgets and CD-ROM Products in the State-Assisted University Setting," in, The Acquisitions Budget, Ed. by Bill Katz. New York: Haworth Press, 1989, pp. 205-217.

Tenopir, Carol, "Publications on CD-ROM: Librarians Can Make a Difference," Library Journal, September 15, 1987, p. 62-63.

Toffler, Alvin, "Toffler's Next Shock," World Monitor, November 1990, p. 34-44.

"Wilson Announces Policy for Network Usage of WILSONDISC," Wilson Library Bulletin, April, 1989, p. 9.

Zink, Steven D., "Planning for the Perils of CD-ROM," Library Journal, February 1, 1990, pp. 1-5.